

American Marten Surveys in Northern Wisconsin 2003

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Abstract

A total of 12 American marten were detected along 197.7 miles of survey, but all marten tracks occurred along the routes in the Marten Restoration Areas (139.2 miles). Marten tracks included 11 along 79.5 miles in the Nicolet National Forest of northeast Wisconsin, and 1 along 59.7 miles in the Chequamegon National Forest of northwest Wisconsin. Rates of marten track observation were 1.7/100 miles in northwest Wisconsin and 11.3/100 miles in northeast Wisconsin. Marten detecting was especially poor in the Chequamegon, partially due to poor tracking conditions.

Introduction

American marten (*Martes americana*) also known as pine marten, were listed as state endangered in 1972. Between 1975-1983, 172 marten were released in northeast Wisconsin in northern Forest County, and between 1987-1990, 139 marten were released into Ashland County in northwest Wisconsin. Martens were released into Fisher Management Units that have become Marten Restoration Areas; no terrestrial trapping for furbearers is allowed in these areas. These refuge areas include 188 mi² of the Nicolet National Forest and 344 mi² in the Chequamegon National Forest. Standardized routes for snow track surveys to assess abundance and distribution of marten were established in 1987 in the Nicolet and 1991 in the Chequamegon (Ashbrenner 1994).

Methods

Three routes of about 25-30 miles each were established in the Marten Restoration Areas (MRA) of both areas, and 2 additional routes were established outside the MRA in the Nicolet National Forest (Figures 1 and 2). Additionally, exploratory surveys are occasionally conducted. Routes were followed slowly with four-wheel drive vehicle one day after a fresh snowfall (Ashbrenner 1994). Tracks of individual marten, other carnivores and porcupines were recorded along each route.

Results and Discussion

Eleven martens were detected along 79.5 miles of survey along routes 1-3 in the Nicolet National Forest, but none were detected along 58.5 miles of routes 4-6 (Table 1). Routes 1-3 were in the Marten Restoration Area, but 4 and 5 were east of the MRA.

The overall rate for the 3 routes was 11.3 marten/100 miles. This was the same as the rate in 2001.

Only one marten was detected along 59.7 miles in the Chequamegon National Forest (Table 2). Two surveys were conducted, but only one was conducted with good tracking snow. Days with good tracking snow were limited in winter 2002-2003. The overall rate of marten track observation was only 1.7/100 miles, and was the lowest rate ever detected for this area. We suspect that low detection rate may be mostly due to sampling error, but could indicate a decline in the local marten population.

The ratio of marten to fisher was 1 marten/ 8 fisher in the Chequamegon, and 1 marten/7.2 fisher in the Nicolet. In the past, the ratios have usually been close to 1 marten to 3 fisher. This index and the index of marten per 100 miles may indicate a decline in the marten population.

Based on analysis by J. Woodford (in preparation) core marten range continues to center around the two release areas with some slow expansion (Figure 3). Reports from state wildlife biologists indicate small populations may also exist in Douglas and Menominee counties. In winter 2003, 9 marten were detected along 10 survey miles in north-central Menominee County.

Other carnivores detected included coyote, bobcat, fox, wolf, dog, bear and otter. Other carnivores appear to be similar in abundance, but coyote and fisher may be more abundant in the Nicolet.

Acknowledgments

Persons assisting on marten surveys included Sarah Boles, Pat Coffen,, Kay Brockman-Medegas, James Robaidek, and other wildlife management personnel. Federal Pittman-Robertson funds and endangered species funds provided funding.

Literature Cited

Ashbrenner, J.E. 1994. Distribution of martens in the Nicolet National Forest, 1994. Wisconsin Wildlife Surveys. 4(1):96-102.

Table 1. Mammal track observations along marten survey routes in the Nicolet National Forest, winter 2002-2003.

Date	Route No.	Snow Depth (in)	Miles Run	Number of Tracks Observed				
				Marten	Fisher	Coyote	Bobcat	Other
1/6/03	1	2"	29.2	2	24	19	3	2 Otter 1 Dog 4 Fox
1/6/03	2	2"	21.5	5	17	15	2	2 Wolf 1 Porcupine
1/19/03	3	1"	28.8	2	16	18	1	2 Otter 2 Fox 1 Porcupine
3/12/03	4	12"	29.3	0	12	9	1	2 Otter 3 Porcupine
1/26/03	5	2"	20.1	0	3	21	3	1 Fox 2 Porcupine
1/28/03	6B	8"	9.1	2	7	8	0	4 Fox 1 Porcupine
Totals				11	79	90	10	6 Otter 1 Dog 11 Fox 2 Wolf 8 Porcupine
Rate per 100 mi (1-3)			(79.5)	11.3	71.7	65.4	7.5	5.0 Otter 1.3 Dog 7.5 Fox 2.5 Wolf 2.5 Porcupine
2001-2002			(123.4)	11.3	51.9	77.0	12.2	2.4 Otter 3.2 Dog 10.5 Fox 4.9 Porcupine
2000-2001			(79.1)	25.3	58.2	49.3	8.8	1.3 Otter 7.6 Fox 3.8 Porcupine
1999-2000			(80.9)	12.4	23.5	32.1	2.5	4.9 Otter 1.2 Dog 3.7 Fox 3.7 Porcupine

Table 1. cont.

Date	Miles Run	Number of Tracks Observed				
		Marten	Fisher	Coyote	Bobcat	Other
1998- 1999	(79.4)	23.9	27.7	27.7	5.0	6.3 Otter 3.8 Fox
1997- 1998	(84.1)	11.9	26.2	41.6	2.4	3.6 Otter 2.4 Fox 3.6 Porcupine
1996- 1997	(76.2)	13.8	37.9	36.8	5.7	2.3 Otter 4.6 Fox 2.3 Porcupine

Table 2. Mammal track observations along marten survey routes near Clam Lake in the Chequamegon National Forest, winter 2002-2003.

Date	Route No.	Snow Depth (in)	Miles Run	Number of Tracks Observed				
				Marten	Fisher	Coyote	Bobcat	Other
1/6/03	1		25.8	0	2	7	0	3 Otter 1 Fox 1 Porcupine
3/12/03	1	4"	33.9	1	6	3	3	5 Otter 3 Fox 2 Wolf
Totals				1	8	10	3	8 Otter 4 Fox 2 Wolf 1 Porcupine
Rate per 100 mi. (1)				1.7	13.4	16.8	5.0	13.4 Otter 6.7 Fox 3.4 Wolf 1.7 Porcupine
2001-2002 (2-3)			45.2	11.1	48.7	13.3	11.1	2.2 Dog 35.4 Fox 28.8 Wolf 2.2 Porcupine
2000-2001			94.4 1 & 3 only	19.1 (10.2)	59.6	11.7	6.4	6.4 Mink 1.1 Badger 8.5 Otter 19.1 Fox 21.3 Wolf 1.1 Porcupine
1999-2000			58.3	20.6	70.3	41.2	12.0	3.4 Mink 18.9 Otter 5.1 Dog 22.3 Fox 8.6 Wolf 3.4 Porcupine
1998-1999	None							
1997-1998			72.6	9.7	41.4	17.2	1.4	2.8 Dog 30.4 Fox 9.7 Wolf 1.4 Porcupine
1996-1997			76.2	17.1	56.4	10.5	2.6	1.4 Otter 23.2 Fox 7.1 Wolf 2.8 Porcupine

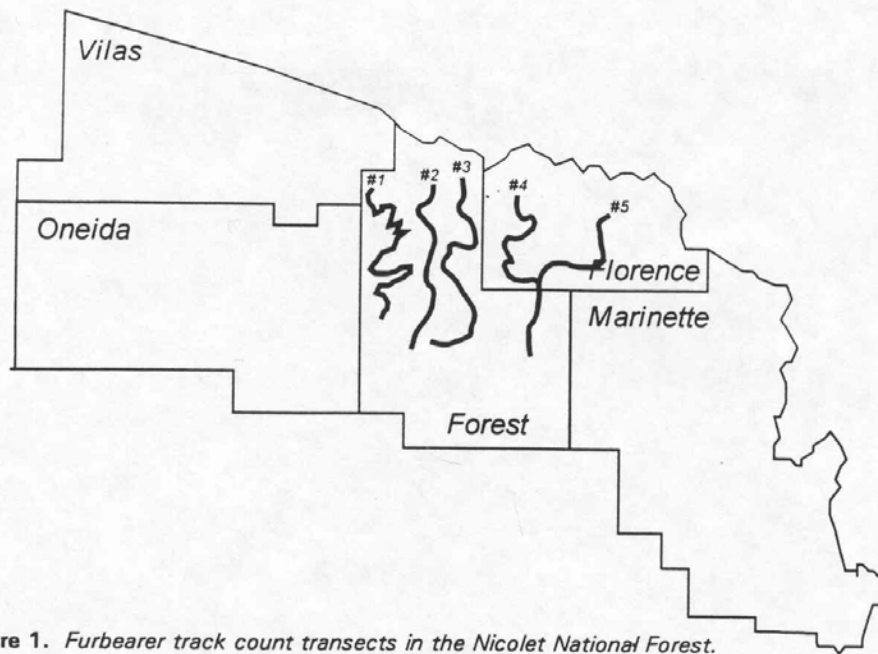


Figure 1. *Furbearer track count transects in the Nicolet National Forest.*



Figure 2. *Furbearer track count transects in the Chequamegon National Forest.*



Figure 3. Core range of American marten in Wisconsin, 1996-2001.
(Based on: J. Woodford, in preparation.)